

REMARKS

The Final Office Action mailed July 3, 2002, has been received and reviewed. Claims 1 through 9 are currently pending in the application. Claim 7 has been canceled. Claims 1 through 6, 8 and 9 stand rejected. Applicant respectfully requests reconsideration of the application.

35 U.S.C. § 102(b) Anticipation Rejections

Anticipation Rejection Based on Applicant's Admitted Prior Art

Claims 1 through 6, 8 and 9 stand rejected under 35 U.S.C. § 102(b) as being anticipated by "Applicant's Admitted Prior Art." Applicant respectfully traverses this rejection, as hereinafter set forth.

A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference. *Verdegaal Brothers v. Union Oil Co. of California*, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). The identical invention must be shown in as complete detail as is contained in the claim. *Richardson v. Suzuki Motor Co.*, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

The Examiner asserts that the claims of the present invention are anticipated by the prior art discussed in the specification of the pending patent application. Specifically, the Examiner asserts that the claims of the present invention are anticipated by the structure of FIG. 14. (Paper No. 7, page 2). Applicant respectfully disagrees.

FIGs. 11-14 of the present application illustrate an "exemplary method for forming a via through a dielectric layer". (Specification, page 3, lines 1-2). With respect to these prior art etching methods, it was stated, "at least one layer of residue forms in the vias as a result of the etching process". (Id., page 2, lines 27-29). Indeed, FIG. 14 includes a via 222 having first residue layer 216 and a second residue layer 224.

By way of contrast with FIG. 14 (and the discussion on pages 2-4 of the Specification of the present application), each of independent claims 1 through 6 and 8 through 9 recite "residue-free" contact openings. Clearly, FIG. 14 of the present application fails to teach, either expressly or

inherently, a residue-free via. Thus, the prior art discussion in the Specification fails to disclose the product made by the process of claims 1 through 6 and 8 through 9.

The preamble of a claim of a patent constitutes a limitation on the claim for the purpose of determining whether a claim is anticipated by a prior art reference. *Divisitech Corp. v. Century Steps, Inc.*, 850 F.2d 675, 7 U.S.P.Q.2d 1315 (Fed. Cir. 1988). Where a patentee uses the claim preamble to recite structural limitations of his claimed invention, the Patent and Trademark Office and courts must give effect to that usage. *Corning Glass Works v. Summitomo Electric U.S.A.*, 868 F.2d 1251, 9 U.S.P.Q.2d 1962 (Fed. Cir. 1989). Thus, as the phrase “residue-free” imposes a structural limitation of the contact opening, the Examiner must consider this portion of the claim when determining whether the admitted prior art anticipates the claims.

As the prior art teachings in applicant’s patent application fail to teach, either inherently or expressly, a residue-free contact opening, applicant submits that the prior art in the pending patent application, including FIG. 14, cannot anticipate the presently pending claims. (See also, Specification, page 3, line 7- page 4, line 25). Reconsideration and withdrawal of the rejection is requested.

The Examiner further notes that U.S. Patent 6,012,469 to Li et al. and U.S. Patent 5,783,496 to Li et al. disclose a semiconductor device having a contact having substantially parallel sidewalls. (Paper No. 7, page 3). The Li references disclose methods of cleaning vias, but do not teach, either expressly or inherently, residue-free contact openings. Thus, the Li references cannot anticipate the presently claimed invention.

CONCLUSION

Claims 1 through 6 and 8 through 9 are believed to be in condition for allowance, and an early notice thereof is respectfully solicited. Should the Examiner determine that additional issues remain which might be resolved by a telephone conference, she is respectfully invited to contact Applicant's undersigned attorney.

Respectfully submitted,



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